

**Notice of Allowability**

Application No.

10/042,847

Examiner

Pierre-Michel Bataille

Applicant(s)

WARKHEDE ET AL.

Art Unit

2186

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 04/25/05.
2. ☒ The allowed claim(s) is/are 1-8, 10-16, 19-24 and 26-57.
3. ☒ The drawings filed on 08 January 2002 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☐ All    b) ☐ Some\*    c) ☐ None    of the:
  1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
  6. ☐ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
    - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
      - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
    - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08),  
Paper No./Mail Date 04/25/05
4. ☐ Examiner's Comment Regarding Requirement for Deposit  
of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413),  
Paper No./Mail Date \_\_\_\_\_.
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_.

## **DETAILED ACTION**

### ***Allowable Subject Matter***

1. Claims 1-8, 10-16, 18-24 and 26-57 are allowed.
2. The following is an examiner's statement of reasons for allowance: an apparatus and method generating representation of hierarchical relationship of a plurality of prefixes.

Closed related Art: US 5,920,886 (Feldmeier) teaches generating a priority field representing a hierarchical level of a ternary/binary hierarchical level addresses; searching the CAM for an address to be translated, matching the addresses in CAM to determine which matching entries have the highest hierarchical level.

However, none of the prior art of record independently teaches or suggests, or in combination renders obvious the teachings of the claims, specifically:

determining an ancestor tree based on a binary trie representation and  
determining an optimized trie representation of the ancestor tree.

This feature taken in light of the specification and the drawings, being recited in all independent claims, renders the claims allowable, as the specification further defines the invention: a trie being a directed path through a tree with each path through the tree qualified by a unique result, a new representation of the set of prefixes is developed using a set of lookup values, such as by using a trie representation, with the new

representation maintaining the original hierarchical relationship with a translation mapping being established to map an original prefix into its new representation and to a lookup value.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

### ***Conclusion***

3. Other prior art made of record and not relied upon but considered pertinent to applicant's disclosure includes:

US 6,529,909 (Bowman-Amuah) teaches system, method and article of manufacture provided for translating an object attribute to and from a database value, a conversion process being determined for converting an object attribute to and from a database value, the conversion process encapsulated in an attribute converter conversion to a second database value.

US 6,052,683 (Irwin) teaches binary search algorithm used for selecting a specific prefix value from the prefix search list to structure the N-bit input address to form a search value, the search algorithm is used for performing an associative search on the search value to find the longest matching prefix.

Art Unit: 2186

WO 200152063A (Millerker et al) teaches method comprising identifying a non-hierarchical information system containing information stored in a non-hierarchical manner and developing a translation map that identifies organizational and content based rules for translating the non-hierarchical information into an hierarchical information system.

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Pierre-Michel Bataille whose telephone number is (571) 272-4178. The examiner can normally be reached on Mon-Fri (8:30A to 5:00P).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew M. Kim can be reached on (571) 272-4182. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Pierre-Michel Bataille  
Primary Examiner  
Art Unit 2186

June 10, 2005

**PIERRE BATAILLE**  
**PRIMARY EXAMINER**